

REMARKS

In the Office Action, claims 2-55 were rejected, and the Title was objected to. By the present Response, the Title is amended. Reconsideration and allowance of all pending claims are requested.

Objection to the Title

The Examiner objected to the Title of the application as non-descriptive. However, the Title suggested by the Examiner is not believed to reflect the scope or subject matter of the claims. Accordingly, the Title has been amended by the present Response to recite subject matter that is more commensurate with the scope of the claims. Reconsideration and entry of the new title are requested, as well as withdrawal of the objection.

Rejections Under 35 U.S.C. § 103

All of the claims were variously rejected under 35 U.S.C. §103 as being unpatentable over Guetz in view of Zandi et al., and in view of these references in combination with others for certain dependent claims. At present, the application includes six (6) independent claims, namely claims 2, 13, 22, 30, 36 and 49. All of these claims are believed to be clearly allowable over the cited prior art, and their reconsideration is requested. The dependent claims are believed to be equally patentable both for the subject matter they separately recite, as well as by virtue of their dependency from an allowable base claim.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the

combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

In the present case, all of the independent claims were rejected as unpatentable over the combination of Guetz and Zandi. The Examiner submitted first that all of the elements of claim 1 can be found in or are suggested by these references. That is not believed to be the case. In particular, the Guetz reference does not disclose lossless compression. Moreover, the Zandi reference teaches a system in which decomposed data is assembled in a data stream prior to compression, a technique which is in stark contrast, and is indeed opposite to that of the recited invention.

The Examiner, in formulating the rejection of all of the independent claims, observed that the Guetz reference involves decomposing image data into sets using wavelet decomposition. The Examiner then observed that Guetz does not explicitly provide for a lossless wavelet decomposition. Not only is this the case, the Guetz reference specifically discusses quantization processes involved in the compression

process. Such quantization is referred to throughout the reference, such as in the explanations provided at Column 8, line 60 through Column 9, line 9; Column 9, line 24-39; and Column 12, line 10-24. Those skilled in the art will readily appreciate that quantization processes, as fully acknowledged by Guetz, involve lossy compression and not lossless compression. Accordingly, the Guetz reference does not disclose lossless decomposition or lossless compression as recited in the independent claims.

The Zandi reference does discuss lossless wavelet decomposition, as well as lossy and lossless compression. However, in view of the discussion in Guetz exclusively of lossy compression, the Applicants submit that the two references cannot logically be combined. That is, imposing lossless decomposition and compression constraints from Zandi on the processes taught by Guetz is entirely inconsistent with the teachings of Guetz. Accordingly, the combination proposed by the Examiner is unsupported by and antithetical to the teachings of the references themselves.

The Zandi reference has also been carefully considered and does not in itself or in combination with the Guetz reference teach the recited subject matter. In particular, the Zandi reference specifically teaches various types of wavelet decomposition followed by assembly of a data or code stream. It is this *assembled* stream that is *then* compressed. This order of operations is discussed throughout the Zandi reference, including in the various lossy and lossless compression schemes. Indeed, it is this exact order of operations that is expressed in the independent claims of the reference (see, e.g., the ordering and modeling mechanism followed by the binary entropy coder of claim 1). By virtue of this ordering of the steps, the data stream, such as illustrated in Figures 24A and 24B of Zandi, is transmitted and decompressed regardless of the resolution which is desired or useful for the user. That is, although the user may select a resolution, the data stream itself is not

composed as recited in the pending claims. As noted in the present application, the ordering of the steps recited in the pending claims facilitates selection and transmission of only desired data based upon the level of wavelet decomposition useful to the user following decompression.

In summary, each of the independent claims recites in one of several different formulations, the decomposition of image data, the compression of data sets resulting from the decomposition in a lossless manner, and the compilation of a data stream comprising the compressed data sets. In contrast to the process taught by Zandi, the data stream is assembled following compression of the decomposed data sets, rather than compression after data ordering and modeling.

In view of the foregoing remarks, it is respectfully submitted that all of the independent claims are clearly patentable over both Guetz and Zandi in any combination. It is also submitted that the two references cannot and should not be logically combined due to the specific teachings of the references, primarily the limitation of the Guetz reference to lossy compression.

Finally, it is respectfully submitted that all of the dependent claims pending in the application are equally patentable both for the subject matter they separately recite, as well as by virtue of their dependency from an allowable base claim. Accordingly, reconsideration and allowance of all pending claims are requested.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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